

## REMARKS

The present application includes pending claims 1-8, 10-19, and 21-23, all of which have been rejected. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1-6, 8, 10-17, 19, and 21-23 remain rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,315,723 ("Robinson") in view of United States Patent No. 5,980,459 (Chiao). Claims 7 and 18 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson and Chiao in view of United States Patent No. 5,873,830 (Hossack). The Applicants respectfully traverse these rejections, at least for the reasons set forth below, and previously during prosecution of the present application.

The Office Action agrees that Robinson does not teach, nor suggest, "summing said first and second weight echoes along said entire scan line to form a composite scan line in an ultrasound image," as recited, for example, in claim 1 of the present application. *See* June 3, 2005 Office Action at page 2 ("... Examiner agrees that Robinson et al do not disclose explicitly the limitation of summing along said entire scan line"; and "Examiner agrees that Robinson et al do not disclosed summing along same scanlines.").

To overcome this deficiency, the Office Action cites column 3, lines 17-29 of Chiao as support for the proposition that a "weighting factor for the multiple scan line involves transmitting multiple ultrasound energy to a same focal position." *See id.* The cited passage of Chiao states the following:

The transmit phases and the "slow-time" filter weightings are designed to selectively enhance the desired modes while suppressing others. In particular, a sequence of broadband

pulses with different phases (and possibly different amplitudes) are transmitted to a transmit focal position over multiple firings, and the set of received beamformed signals are multiplied with a set of (possibly complex) scalar weightings before summing together that set of weighted beamformed signals for subsequent processing to form one image scan line. A complete image is formed by repeating this procedure for multiple transmit focal positions across the region of interest.

Chiao at column 3, lines 18-29. Chiao discloses multiplying a set of scalar weighting before summing together that set of weighted beamformed signals for subsequent process to form one image scan line. *See id.* Chiao, however, does not teach, nor suggest, “summing first and second weighted echoes **along said entire scan line** to form a composite scan line,” as recited, for example, in claim 1 of the present application. While Chiao does disclose “forming” an image scan line, it does not necessarily teach or suggest “summing first and second weighted echoes along said entire scan line.”

In order to overcome this deficiency, the Office Action states that “it is inherent that Chiao et al’s disclosure is identical to summing along a same scan line.” *See* June 3, 2005 Office Action at page 2. The Applicants submit that a rejection based on inherency **must** include a statement of the rationale or evidence tending to show inherency. *See* Manual of Patent Examining Procedure at § 2112. “The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.” *See id. citing In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

To establish inherency, the extrinsic evidence “must make clear that the missing descriptive matter **is necessarily**

**present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.**

*In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added). The Applicants respectfully submit that neither Chiao, nor the Office Action, “make[s] clear that the missing descriptive matter,” said to be inherent, “is necessarily present in” Chiao.

A rejection based on inherency must be based on factual or technical reasoning:

In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teaching of the applied prior art.

*Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

The Applicants respectfully submit that the Office Action does not contain a basis in fact and/or technical reasoning to support the assertion of inherency. Instead, the Applicants respectfully submit that the claims now stand rejected based on a conclusory statement that Chiao inherently discloses summing along an entire scan line, rather than upon a “basis in fact and/or technical reasoning.” Accordingly, the Applicants respectfully submit that, absent a “basis in fact and/or technical reasoning” for the rejection of record, the present claim rejections should be reconsidered and withdrawn.

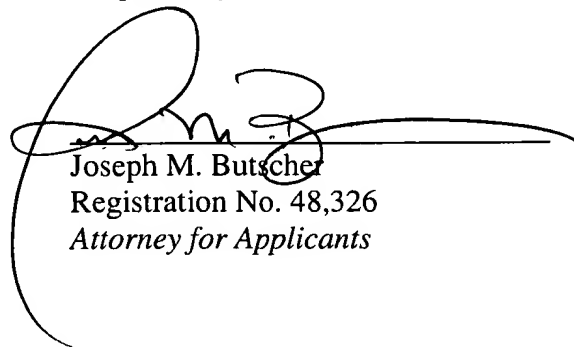
As noted above, Robinson does not teach, nor suggest, "summing first and second weighted echoes **along said entire scan line** to form a composite scan line." Similarly, Chiao also does not expressly or inherently teach or disclose this limitation. Because neither Robinson or Chiao teach this limitation, the combination, by definition, also does not teach, nor suggest, this limitation. Thus, at least for this reason, the claims of the present application should be in condition for allowance.

In light of the above, the Applicants request reconsideration of the rejections of the pending claims of the present application and look forward to working with the Examiner to resolve any remaining issues in the application. If the Examiner has any questions or the Applicants can be of any assistance, the Examiner is invited to contact the Applicants. The Commissioner is authorized to charge any necessary fees or credit any overpayment to USPTO Account No. 07-0845.

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